Article 19

AMENDED CLAIMS

[received by the International Bureau on 10 April 2000 (10.04.00); original claims 1-16 replaced by new claims 1-9 (2 pages)]

1. Device for removing biomolecules comprising an ultrafiltration module optionally upstream and in series with a dialysis module, characterized in that this device further comprises a column containing an adsorbent gel combining the properties of size exclusion and affinity chromatographies, said adsorbent gel consisting essentially of a polysaccharide matrix onto which is grafted a polymer coupled to an affinity ligand and having an adjustable cut-off of between 2 kDA and 60 kDa, said column being mounted branching from said ultrafiltration module.

2. Device according to claim 1, characterized in that the adsorbent gel consists of a matrix based on an agarose derivative onto which is grafted polyethylene glycol coupled to iminodiacetic acid itself coupled to copper(I) ions and having a cut-off of 20 kDa.

3. Device for separating and purifying biomolecules comprising a column containing an adsorbent gel combining the properties of size exclusion and affinity chromatographies, said gel consisting essentially of a polysaccharide matrix onto which is grafted a polymer coupled to an affinity ligand and having an adjustable cut-off of between 2 kDa and 60 kDa, said column being optionally mounted branching from a filtration module.

4. Device according to claim 3, characterized in that the adsorbent gel consists of a matrix based on an agarose derivative onto which is grafted polyethylene glycol coupled to iminodiacetic acid itself coupled to copper(I) ions and having a cut-off of 20 kDa.

Sub A1

5. Device according to claim 2 or claim 4, characterized in that the biomolecule is serum β2-microglobulin.

6. Use of the device according to claims 1 to 5 for removing biomolecules from blood, with the exception of extracorporeal dialysis.

7. Use according to claim 6, characterized in that the device comprises an adsorbent gel consisting of a matrix based on an agarose derivative onto which is grafted polyethylene glycol coupled to iminodiacetic acid itself coupled to copper(I) ions and having a cut-off of 20 kDa.

8. Use according to claim 7, characterized in that the biomolecule is serum β2-microglobulin.

Sub A2

9. Device according to any one of claims 1 to 5, characterized in that the device is an extracorporeal dialysis system.